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The Missouri Miner, June 01, 1925

THE

MISSOURI MINER.

Alumni Edition

Missouri School of Mines and Metallurgy, Rolla, Missouri.

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COMMENCEMENT WEEK HAS FULL PROGRAM.

The first event of a week overflowing with worth-while activities was the Baccalaureate address by Dr. I. M. Hargett, of Grand AvenueTemple, Kansas City, which was delivered Sunday morning at Parker Hall. Seldom, in Rolla, do we have the opportunity of listening to a man of Dr. Hargett's caliber. To hear him speak is to feel his gripe, to know his power of persuasion for the things he believes most worth while.

It is with regret that we are forced ,through lack of space, to omit a synopsis of Dr. Hargett's excellent sermon. Suffice it to say that he concluded his talk with suggestions for he inception of world brotherhood, the abolishment of wars, and continued progress with a reasonable amount of competition and much more cooperation.

Commencement Play.

The second event on the Commencement program is the well known play, "The Boomerang," to be given by the M. S. M. Players, at Parker Hall, Wednesday, 8:15 p. m. The Players have put in a lot of hard work on this production, and undoubtedly it will be a fitting climax to the excellent plays which they have given at M. S. M. this year.

Frosh Fracas.

The annual Freshman dance will be held in the gymnasium, Thursday night, June 4. The orchestra shows indications of being the hottest ever. Get that date and be there!

Director's Reception.

Dr. Fulton's reception to students, faculty, and visitors will be held at his residence from 3 to 5 p. m., Friday. This reception has come to be a regular part of the program of the week and serves to forge one more link in the chain of associations that binds faculty, students, and patrons of the school together. To the seniors it stands out as one of the few remaining times at which they can mingle with those whom they have

Continued on Page Two.

THE MISSOURI MINER CALENDAR 1925-1926.

Next school year the Alumni Association and the Miner Board will co-operate in the publication of nine alumni editions of the school paper. (There will be twenty-six other editions.)

In each edition there will be published all alumni news that is available. The various editions will be dedicated to certain classes of graduates, as indicated at the close of this article. In addition to ordinary news it is hoped that the alumni will contribute articles of a general or technical nature in which graduates or undergraduates would be interested.

The success of this venture depends on the efforts of the alumni. Start now planning some contributions, so that when the edition of your class is ready for press there will be ample news to make it a success.

Sept. 28th, Alumni Edition—Dedicated to the classes of 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1924, 1925.

Oct. 26th, Alumni Edition—Dedicated to the classes of 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1890, 1891, 1923.

Nov. 30th, Alumni Edition—Dedicated to the classes of 1892, 1893, 1894, 1895, 1896, 1897, 1922.

Dec. 21st, Alumni-Christmas Edition—Dedicated to the classes of 1898, 1899, 1900, 1921.

Jan. 25th, Alumni Edition—Dedicated to the classes of 1901, 1902, 1903, 1920.

Feb. 22nd, Alumni Edition—Dedicated to the classes of 1904, 1905, 1906, 1918, 1919.

March 29th, Alumni Edition—Dedicated to the classes of 1907, 1908, 1916, 1917.

April 26th, Alumni Edition—Dedicated to the classes of 1909, 1910, 1915.

May 31st, Alumni-Commencement Edition—Dedicated to the classes of 1911, 1912, 1913, 1914.

———M S M———

Patriotism is taking your arm from around your girl to clap as the United States Cavalry gallops across the screen."—Jack-o-Lantern.

KAPPA SIGMAS WIN BASEBALL CHAMPIONSHIP.

Two defeats during the last week of the baseball series, after winning eight straight games, saw the Bonanzas lost their hold on first place, and gave the Kappa Sigs, who adinistered one of the defeats in the play-off for the cup, the championship intra-mural baseball cup. The Faculty nine subdued the Bonanzas for the first time during the season on Monday, and the Kappa Sigs completed the rout by winning the play-off on Friday afternoon.

In Monday's game "Doc" Schrenk twirled his best ball of the year, and sent the previously unbeaten Bonanza nine down to a 3 to 1 defeat. Arra's offerings were hit hard in one inning, and the two runs scored by the Faculty in this inning, together with a lone score, proved the main factors in the Bonanza's initial setback. Thornberry backstopped for the Faculty, with Cushing receiving for the losers.

Tuesday saw the Kappa Sigmas earn the right to play off the Bonanzas for the championship by defeating the Sigma Nu's, 5 to 2. Smith and White proved an effective battery for the winners, while Nolan and Smith were the Sigma Nu batterymates.

The Sigma Nu's played the Kappa Alphas in a game Thursday, heralded as a "Comedy of Errors," for the cellar position. This game was remarkable since the winner of the game lost the cellar championship. The Kappa Alphas emerged the winner of the championship, and consequently the loser of the game. The score was 10 to 8. Nolan, Johnson and Smith were the winning battery, and Holman and Johnson performed in like capacity for the losers.

Friday's game for the championship between the Kappa Sigs and the Bonanzas was well (or sadly) punctuated with errors by both teams that plyaed a major part in the scoring. The final score was 13 to 12, with the Kappa Sigs holding the championship with the best end of the score. The winners opened the scoring in the initial frame by denting the rubber

four times. The Kappa Sigs added two more to the total in the third inning, and raised their advantage to six to one, only to have the Bonanzas bring their total up to five. A seven-run rally by the winners served to put the game out of reach for the Bonanzas, and they entered the last inning eight runs in the rear. The Bonanzas refused to be disheartened and hit the horsehide for seven runs, only to be halted with the tieing run on third base, and a tie or victory in sight.

———M S M———

Continued from Page One.

come to know while here at M. S. M.

Commencement Ball.

The annual Commencement Formal, given in honor of the graduates, will be held at Jackling gymnasium, Friday, June 5, at 9 p. m. An excellent St. Louis orchestra has been secured, and a pleasant evening is promised. A special invitation is extended to members of the class of '25 and to members of the faculty and student body.

Commencement Exercises.

The Commencement Exercises proper will begin at 10 a. m., Saturday. The address will be delivered by Dr. Edwin E. Slosson, Director of Science Service, Washington, D. C., who will speak on the subject, "Looking Backward and Living Forward." Immediately after the address, the much coveted degrees will be conferred upon the hopeful aspirants.

———M S M———

ORDER OF REGISTRATION.

September, 1925.

Names E to G inclusive, Monday, Sept. 14, 9 to 10 a. m.

Names P to S inclusive, Monday, Sept. 14, 10 to 11 a. m.

Names T to Z inclusive, Monday, Sept. 14, 11 to 12 a. m

Names K to Mc inclusive, Monday, Sept. 14, 1 to 2 p. m

Names A to Bo inclusive, Monday, Sept. 14, 2 to 3 p. m.

Names H to J inclusive, Monday, Sept. 14, 3 to 4 p. m.

Names Br to D inclusive, Tuesday, Sept. 15, 8 to 9 a. m.

Names M to O inclusive, Tuesday, Sept. 15, 9 to 10 a. m.

New students, registering for the first time, may register at any time on Monday or Tuesday.

The order in which the groups are to register was determined by drawing from the proverbial hat, in order to avoid any semblance of partiality.

H. H. ARMSBY,
Registrar.

FINAL LEAGUE STANDING.

	W.	L.	P.CT.
Kappa Sigma	9	1	900
Bonanza	8	2	800
Faculty	7	2	778
Prospectors	5	4	555
Pi Kappa Alpha	4	5	444
Independents	4	5	444
Grubstakers	4	5	444
Lambda Chi Alpha	3	6	333
Sigma Nu	2	8	209
Kappa Alpha	1	9	100

———M S M———

FOOTBALL SCHEDULE, 1925.

Oct. 2—Shurtleff College, at Rolla.
Oct. 9—McKendree College, at Rolla.
Oct. 17—Missouri U., at Columbia.
Oct. 24—Kirksville Osteopaths, at Rolla.
Oct. 31—St. Louis U., at St. Louis.
Nov. 7—Open home date.
Nov. 14—Washington U., at St. Louis.
Nov. 21—Drury, at Springfield.
Nov. 26—Springfield Teachers, at Springfield.

———M S M———

M. S. M. MEN WHO WILL RECEIVE GRADUATE DEGREES.

Engineer of Mines.

K. H. deCousser, B. S. '22, M. S. '22, M. S. M.
E. L. Miller, Jr., B. S. '21, M. S. M.
C. E. Millikan, B. S. '22, M. S. M.
A. B. Needham, B. S. '21, M. S. M.
F. P. Shayes, B. S. '17, M. S. M.

Chemical Engineer.

A. C. Laun, B. S. '21, M. S. M.

Metallurgical Engineer.

W. M. Kahlbaum, B. S. '21, M. S. M.
J. Walter Scott, '19, M. S. M.

Civil Engineer.

J. L. G. Lehman, B. S. '05, M. S. M.

Doctor of Science (Honoris Causa)

H. A. Buehler, B. S. '01, University of Wisconsin.

———M S M———

STATEMENT.

To Whom It May Concern:

I have examined the books of The Missouri Miner and find that all expenses have been for legitimate purposes, that the books are properly kept, and that for the period from September 15, 1924, to May 24, 1925, the operations of The Missouri Miner show a net loss of $175.32.

The receipts for the remainder of the school year are estimated at about $225 and the expenses at about $250, which indicates a probable net loss for the school year of approximately $200.

H. H. ARMSBY,
Student Advisor.

MECHANICAL UNDERGROUND LOADING EQUIPMENT.

A comprehensive review of mechanical underground loading equipment nad processes in metal mines, containing the results of a co-operative investigation between the Department of the Interior and the Missouri School of Mines and Metallurgy, is contained in a bulletin by Charles E. Van Barneveld, mining engineer, Bureau of Mines, which has recently been issued by the school named. The bulletin is the result of several years' study of various types of equipment in the different classes of mines, conducted by the Bureau of Mines engineers.

Recent improvements in design and construction of loading machines have markedly changed the general attitude of mining men towards mechanical loading, states the author of the bulletin. At first they were distinctly unfriendly and distrustful. Many early machines proved unreliable. Some operators, who recognize that mechanical loading was the next step ahead, bent all their energies developing machines to suit their conditions. Thus both manufacturers and users gradually learned what constituted a properly designed and built machine and what constituted the proper use of a machine.

The underground loading machine must be strong enough for a very hard service. A mechanical loader must operate under unexpected and abnormal strains and is subject to more carelessness, neglect and abuse than similar machinery on the surface. The machine should be adapted to as large a variety of operating conditions as possible within the particular range for which it is specially designed. The machine should be able to move in after blasting and to move out after loading without loss of time, with the provision that when machines mounted on continuous tread are used the condition of the bottom will be an important factor.

The advantage gained by speed in loading will be wholly lost if loaders can not be kept in continuous operation. In order that mechanical loaders may be efficient the accessory equipment, comprising track, cars, haulage, underground storage, hoisting plant, and surface storage must be proportioned to the service.

Loading machines are operated by compressed air or by electric power. Some manufacturers can furnish loaders operated by either power; others spceialize in one or the other.

The successful application of mechanical loading is squarely up to the management of a mine and requires intelligent selection and planning good supervision, and whole hearted cooperation all along the line. There are now available enough reliable mechanical loading appliances to satisfy the entire range of requirements in the mining of metallic and nonmetallic minerals.

Information regarding various types of locomotives used in connection with underground loading processes is contained in the bulletin. The adaptation of steam shovels to underground mining is discussed at some length. The use of scrapers in underground loading processes is also given much space. Detailed descriptions of underground loading devices employed in numerous metal mines are given. Copies of this bulletin may be purchased from the School of Mines and Metallurgy, University of Missouri, Rolla, Mo., at the price of $1. Missouri School of Mines alumni can obtain this bulletin without charge if they will address the Director.

———M S M———

K. A. ALUMNUS VISIT.

Alumni of Beta Alpha Chapter of Kappa Alpha who have visited the Chapter during the term are: During St. Pat's, K. V. Moll, D. L. Moodie, W. E. Remmers, M. P. Brazill, N. Rountree, B. H. Moore and O. L. Brandenberger. At various other intervals were: J. P. Kenney, who was in Rolla between semesters; Dodd Gibson, who has paid several visits recently; C. E. Stover, G. T. Dierking, R. T. Muench and C. C. Whittlesey.

Facts of interest concerning the present locations of these men: Moodie, '24, Laclede-Christy Clay Co.; Remmers, '23, Instructor of Mechanical Engineering, Washington U., St. Louis; Brandenberger, '22, Florida Highway Commission; Brazill, '20, United Last Co., St. Louis; Moll, '06, Wholesale Grocer, St. Louis; Rountree, '23, Mo. State Highway. Moore, ex-'24, Mo. State Highway; Gibson, '23, DesLoge Consoidated Lead Co., DesLoge, Mo.; Kenney, '12, Contractor, Chicago, Ill.; Stover,'24, Golden Rod Mining Co., Tar River, Okla.; Dierking, '23, Streets and Sewers, St. Louis, Mo.; Muench, ex-'25, X-Ray Work, Nashville, Tenn.; and Whittlesey, ex-'24, Missouri Pacific, Louisiana.

HEAT TREATMENT OF CAST IRON.

Pioneer Work at Holt Mfg. Co. Described Before Chicago Chapter of the Steel Treaters.

The results of pioneer research in the heat treatment of cast iron were presented in a paper by Fred Grotts, metallurgical and inspection engineer Holt Mfg. Co., Peoria, Ill., at a meeting of the Chicago chapter of the American Society for Steel Treating, held at the City Club, Chicago, Thursday evening, March 12. Owing to the unavoidable absence of the author, the paper was read by M. L. Frey, metallurgist Holt Mfg. Co., and collaborator with Mr. Grotts in the experiments.

———M S M———

MINERS MAKE GOOD.

Two Clippings from the Ellis County News, Hays, Kansas, will be interesting to the alumni. G. E. Ebmeyer is from the class of '20. M. M. Valerius is father of the Senior Rock Hound now in school.

———M S M———

WELL KNOWN GEOLOGISTS SURVEYED STRUCTURE.

"Who wee the geologists that located the Polifka anticline?" is a question frequently asked these days.

The geologists employed to "run" the geology were H. E. Munson and G. E. Ebmeyer, both of Tulsa. Both geologists have a high rating among the big oil companies, and when the survey of Ebmeyer & Munson "checked" with the findings of the geologists of the oil companies sent here to inspect it, a number of tracts were leased to big companies. In fact, it is asserted more large oil companies are interested in the Catherine well than in any other western Kansas test.

(The other article is on Page 15.)

———M S M———

SIX MEN WILL RECEIVE TRACK LETTERS.

Six men will receive track letters as a result of their performances on the M. S. M. trak team during the past season. Runge, McLaughlin, McFann, Coil, Knox, and Thompson will b ethe receivers of the "M." McFann's performance in winning at least one first in every meet he entered, and winning three firsts in the dual meet with the Drury Panthers, gives him the position of highest scorer for the track season, and also the position of the outstanding Miner track man for the past season.

Firsts scored by Thompson in the century dash, Runge in the shot put, McLaughlin in the javelin throw, Coil in the half-mile run, and Knox in the two-mile run, gave them track letters. The formality of awarding the letters will be enacted by the Athletic Association at their next meeting.

———M S M———

PROF. DEAN TO CONTINUE WORK IN PITTSFIELD.

Prof. Geo. R. Dean, Professor of Mathematics, leaves Friday, June 5, for Pittsfield, Mass., where he will continue his mathematical and experimental researches in high voltage engineering for the General Electric Company.

This arrangement, however, is only temporary, as Prof. Dean expects to return to M. S. M. in teaching capacity next fall. For some time Prof. Dean has been engaged in work of this nature for the General Electric Co., and his knowledge should assist materially in the solution of this type of problems.

———M S M———

MINER ALL-STARS DEFEAT ST. JAMES.

In a game for the benefit of the M. S. M. Booster Club an all-star Miner nine vanquished the St. James diamond performers by a 12 to 9 score. Although the Jimtowners outhit the Miner horsehide chasers thirteen to ten, good support behind "Doc" Schrenk's pitching in the pinches gave the Miners their edge in the victory..

A remarkable catch by McCoy of a line drive in deep center field, with the sacks loaded in the eighth inning converted defeat into victory for the Miners. "Mac" speared the horsehide at full speed, took a bad fall on the concrete rail bordering the track, but held onto the ball and lined it to first, doubling the runner off the base for the third out.

Schrenk and Arra were the Miners' battery, and worked well in the pinches, although "Doc's" offerings were nicked for thirteen safeties. Lewis took the mound for the visitors, with Squires receiving. Lewis was also hit hard, the Miners collecting ten bingles from his delivery.

———M S M———

SOUTHEAST MISSOURI ALUMNI ENTERTAIN SENIORS.

On April 28th, the alumni who are located in the famous lead belt entertained the senior class and also organized a Lead Belt Section of the Alumni Association. The officers elected were L. A. Delano, '04, President; H. A. Neustaedter, '16, Vice-President; E. R. Tragitt, '23, Secretary; and E. T. Campbell, '23, Treasurer.

The Lead Belt alumni plan to hold a meeting each year when the senior class is in the district on their annual inspection trip.

PROSPECTS FOR FOOTBALL AT M. S. M.

The writer has not the critical ability of a Walter Camp, nor the strategical football understanding of a Percy Houghton, but he is, nevertheless, entitled to a guess in answer to the omnipresent query, "What's wrong with football at M. S. M.?" Further, his viewpoint is broader in this respect than either the students or the alumnus' as he is an alumnus actively connected with the school.

The alumni wail is "You haven't got the old spirit and pep we used to have. With your material and our old pep, oh, boy! Why, with only twelve men in the squad and no regular coach, we beat everything in sight and between the group of us we never really trained. We had our beer busts, all night five-card bridge sessions, etc., etc. It must be the coaches or something." All of which freely translated means the team is always losing, something's wrong, so change something or other. The criticism is about as helpful as this epitome would indicate.

The student's viewpoint is necessarily a consolidation of the individual moans and can perhaps be best grasped by citing a few campus effusions on a football day.

"Are you going to the game, today, Bill?" (You old timers, imagine that!)

"I dunno, I might, but I'll bet you two to one, we lose by seven points or better. Can't seem to get a kick out of these track meets unless I'm risking something."

"Won't take you. If we win they look like a team that Missou herself couldn't stop; but when we start losing did ya ever notice they act like a persistent but foolish Ford ramming a street car. Plenty of fight of a sort, but it's a desperation punch with tears in their eyes; no organized, smooth-working effort like they show when the score is right."

"He'lava guy, where is your school spirit?"

"What is it to you, you don't know what the word means."

"Oh I don't pretend to have, or manufacture any, just thought you looked like easy money."

No, old-timers, they don't get wrinkled, ponded or hung. This is a free country, you can talk as you please; but, as I hear you saying—"Ye gods and Cleopatra on a raft!" Check that noble sentiment.

As Ebmeyer would say, "Run the bums out," but does that accomplish anything?

So much for things as they are, and now for things as they ought to be as the writer sees it.

Students:

You never get anything you don't want except bad luck. Unless you actively want teams that are a credit to the school you won't get them. As McCollum puts it, "I don't care what the size of the school is, the rules say you can only play eleven men at one time. If the student body and team eats, sleeps, and thinks winning football they'll play that variety." It's a question of changing knocks, criticism, and doleful dirges to work. As Sam Lloyd would say, "the spirit of the group is bound to infest the individual", and this works either way. In practice this automatically means more men out for football that stay out, and don't quit because they think the coach doesn't know a good man when he sees him—they'll stay out and show him. This means more competition and all that it engenders: better practices, more men developing, less of that temptatious luxury—loafing, and all working to make and hold a place. With a team spirit of that kind you may occasionally lose a game but you'll never be routed, and you'll work harder at your next week's practice than ever.

As for the student body that for some darn good reason only are not candidates—bear in mind that the men out for teams are under a slight hnadicap as to time, and pitch in and and help them out on anything you can. Make the team feel you'd be out with them if you could and make them realize you appreciate any effort they put out for the common good, for remember it is a common good.

School spirit, no I don't advocate manufacturing it, you can not make a good substitute. How do you get it then? It is simply a by-product of united effort. It comes from realizing that while eleven men play football, literally the whole school is not only represented but constitutes that team It exists when a student body can truthfully say, "That is the best team we can turn out and we are all active members." When this united effort exists the only criticism heard is that somebody double-crossed them and laid down on his job.

The long-winded pros and cons on school spirit are not only a waste of time and effort but keep you away from the very thing that makes it—united effort.

As for next year's prospects, the coach is all that could be desired; knows and lives football and has himself this winning spirit; the whole team is coming back except Hasselman and Buck, and we have a student body that are on the verge of thinking and living winning teams. If the student body will realize this and pitch in, the stage is set for the best since '14. If the student body won't or don't want to, don't crab t the results.

Alumni:

The School's often reiterated and direct appeal to you is send us men. Our Alumni Association isn't strong enough to make any inducements, and this leaves it up to the individuals to get busy and do your part. We can use all you can send, and the more support you give the easier it will be to instill a winning spirit here. The spirit is here but it's latent and needs nourishing. Your display of spirit in scoutng up and sending men, and the men as material contributions are all they will be needed to cause this latent spirit to blossom into united effort which means school spirit and winning teams.

The prospects for next year are then just what the student body and alumni choose to make them.

———M S M———

"SKINNY" ORR TO WED.

The following clipping from a Fort Smith, Ark., newspaper was received recently by The Miner:

"Announcement of the engagement of Miss Lyndon Elizabeth Park and Mr. Raymond Fitzgerald Orr, of Webb City, Mo., is made. The wedding will be an event of early summer. The date has not been announced.

Miss Park is an instructor in the English department of the Fort Smith high school, where she has taught the last two years, following her graduation from the University of Arkansas.

Mr. Orr has just graduated at the Missouri School of Mines, Rolla, Mo. He is a Sigma Nu fraternity man. Miss Parks is a member of the Tri Delta sorority."

Will "Feet" Valerius be the next?

———M S M———

Son: "I'm a big gun at college."

Pater: "Then why don't I hear better reports?"—Buffon.

THE MECHANICAL ENGINEERING DEPARTMENT AT M. S. M.

The M. S. M. power plant is housed in the old Metallurgy building. Outside, very few changes have taken place. The wind box that formerly protruded from the east side has grown to a conduit 28 inches in diameter and 40 feet long, fabricated from tank plate. It now points south to the Rolla building. Keeping it company are two tanks removed from the attic of Norwood Hall and formerly part of the water system but now demoted to serve as part of the equipment for hydraulic work. They are used in conjunction with two motor-driven centrifugal pumps which are so connected and valued that they can be operated either series or parallel as the whim or wish of the instructor dictates. This equipment is further supplemented with a Venturi tube and a weir box for water measurement. The ensemble makes a very good outfit for hydraulic experiments dealing with centrifugal pumps, Venturi tubes and various weirs. Water can be measured through the tube and over the weir and finally checked in the tanks to obtain the delivery from the pumps for various operating conditions. Supply water for the pump comes from a reservoir located beneath the concrete slab supporting the rectangular tank. The above reservoir is assisted by another cistern located on the north side of the boiler room.

Before the above mentioned tanks could be removed from Norwood Hall, an adequate water supply system had to be provided. The old system pumped water with an air lift pump to the two cisterns previously mentioned, and from these by way of a Worthington duplex pump to the above tanks. The air lift was practically abandoned in 1920, water being purchased from the city, and pumped by the duplex pump to the top of Norwood Hall either by way of the cisterns or delivered from the city mains to the pump suction direct.

The old system has given way to a 75,000 gallon tank located north and west from Jackling gymnasium on the slope of the hill just above the athletic field. This tank feeds the 4 inch water mains over the campus through a 4 inch line laid from the pump house, north of the boiler room, to the tank. Water is pumped from our own well by a United Iron Work's Pomona deep well pump directly to the storage tank through the 4 inch line. The working barrel is 353 feet from the discharge tee of the pump and is 92 inches long and 6 inches in diameter. The pump, a steady steam type, makes 17 R. P. M. and handles 80 gallons of water per minute. Our average daily water requirements are supplied by the pump operating 7 hours of each 24. The pump is motor driven by a General Electric motor thru a silent chain belt running in oil. The pump rods are handled by a 5 ton crab and a pipe frame derrick supported at three corners on the walls of the building, and the fourth leg is carried on the floor of the house.

The greatest change has perhaps occurred inside. The engine room has a 180 K. V. A. generator, 2200 volt, 3 phase 60 cycle direct connected to a 15"x24" Nordberg-Todd Unaflow engine. A motor and exciting set, comprising a D. C. motor or generator, synchronous motor or generator and an exciter was installed in order to have the plant the most flexible. By using this set we can put 212 K. W. D. C. at 220 volts on the line or 300 K. W. at 2200 volt 3 phase 60 cycle on the line. The synchronous motor operates as a condenser to give us practically unit power factor. Under normal operation the Unaflow engine carries all of the load. The D. C. 220 volt load being carried by the synchronous motor driven from the main unit.

The switchboard has grown from a five panel D. C. and one panel A. C. board separated to an eleven panel combined board located on the east side of the engine room.

The above constitutes the new equipment in the engine room. The old equipment which has been retained follows:

1 - 50 K. V. A. 3 phase 60 cycle 2200 volt generator direct connected to a G. E. Marine engine. 1 -75 K. V. 220 volt D. C. generator direct connected to an Ideal engine, 1- 100 K. W., 220 volt D. C. generator direct connected to a Ball engine, 1 two stage, straight line, single steam cylinder Sullivan air compressor, 1-20 H. P. Otto gas engine, 2 centrifugal pumps, 1 Kenn turbine, 1 Curtis turbine direct connected to an 80 ampere 125 volt D. C. exciter, a Westinghouse motor so connected and installed as to load the Otto engine or to drive the centrifugal pumps 2 automobile engines, 1 small vertical engine, the original prime mover for the school, and 1 Bessemer Kero-gas engine complete the equipment. All pipe lines have been changed from overhead to a tunnel under the engine room floor.

In the boiler room Laclede Christy chain grate stokers have replaced hand firing. The boilers have been reset in two batteries of two each, where formerly they were in one setting. The distance from the front water leg to the floor has been increased from 4 feet 6 inches to 9 feet 0 inches. The boilers which are Heinie water tube boilers of 110 horsepower each normal rating have been vertically baffled in place of the former horizontal baffling. The main steam header is carried on the roof of the ash tunnel at the rear of the boilers, the boiler leads sweep down over the side of the setting through the floor to connect to this header. The boiler control valves are the outside screw and yoke type located about 4 feet 6 inches above the boiler room floor. The feedwater line is, also, carried along the roof of the tunnel and passes up over the side of the setting. Pipe bends have been used wherever practicable for all connections. The engine room is particularly rich in this type of construction.

Money for further repairs and alterations to the power house has been asked for, and if appropriated will mean an up-to-date coal handling system, new roof for both engine and boiler room and plastered walls for both with possibly new floors. Further proposed changes in the engine room are an increase in mechanical laboratory size by taking the rooms now occupied by the C. E. Dept. for instrument storage and converting this over to engine room space. This will mean more varied assortment of equipment for laboratory work.

In Mechanical Hall we have the wood shop, forge shop, machine shop and oxy-acetylene welding room. The wood shop is well equipped with work benches each drawer of which holds a complete set of tools required for making the different exercises required for preliminary training before the classes receive instruction in making simple patterns and the use of the wood lathes.

The forge shop has sufficient equipment to accommodate twenty-two men. It is fitted wth benches and

Continued on Page Eleven.

AN INTERESTING LETTER.

D. B. Followill Gives Sketch Of His Trip to Buenos Aires, South America.

Having been requested to give a sketch of my recent trip to South America, I will make the attempt, hoping it may in some way give interest or information to some of the graduates who may contemplate a visit into the Latin-American country.

It was a long, tiresome but very interesting trip, and not so monotonous as one would expect, considering we were eighteen days making the trip from New York to Buenos Aires. There were a number of deck games provided by the crew and handled in tournament form, thirty-two prizes being distributed among the winners at the end of the journey. This was made a real event, the prizes being awarded at the Captain's dinner which was looked forward to with much interest and pleasure, given the evening before our journey was ended.

A swimming pool was erected the third day out of New York and was most popular throughout the trip. Every other night we were treated to the movies and also enjoyed some high-class entertainment.

Among our passengers there were Ambassador Diaz and family from Mexico going to his post in Brazil; also Rear-Admiral McCully going to take charge of and train the Brazilian Navy for a period of two years; and with him were Commander Bristol and staff.

Leaving New York, January 3, we sailed for twelve days averaging 410 nautical miles per day, and at the end of the twelfth day we sailed into one of the most beautiful harbors on the coast, that of Rio Janerio. The coast here is very mountainous, the bay is in the form of a horseshoe, and incoming boats must enter a narrow channel guarded on each side by high cliffs surmounted by well-guarded forts, making it almost impossible for an emeny to enter.

The City of Rio, generally acknowledged to be the cleanest and most beautiful city in the world, lies in a basin, towering mountains almost enclosing it, on whose slopes many homes are built, the city spreading out over the entire low lands.

The wonderful climate of Brazil, making it possible to produce the finest fruits and flowers in the world, makes Rio a most attractive city. But to our North American travellers the climate is not so ideal, being too hot for comfort. Their beautiful buildings have no heating equipment of any description, and the natives see overcoats only when carried by travellers entering or leaving their city. The language generally spoken is Portuguese, but one who speaks Spanish can get along without an interpreter. One day was spent at Santos, a business center, and from which comes great productions of coffee and fruits of all descriptions.

After our next stop at Montevideo, we had a twelve hour ride up the La Plata River to Buenos Aires, my destination. In this large metropolis I spent three weeks in a lead smelter and refinery owned and operated by the National Lead Co. The smelter gets its ore from the northern part of Argentine, near the Bolivian border. There are no doubt rich lead deposits in Argentine, but so far the railroads are not near enough to be available. It is believed, however, that from year to year the railroads will push farther into these valleys, following up the cattle raisers and ranchers until they reach the vicinity of the ore deposits. When that time comes, mining will have its place among other large industries of the Argentine.

I found Buenos Aires a much more desirable place to live than any one of the Brazilian cities, first because of its climate which is much cooler and likened to that of our own southern states. The surrounding country is a wonderful wheat, cattle and fruit country, which makes food cheap and thus enhances living conditions. The city with its two million population is a wonderful business center and much more modern in its methods than the cities in Brazil. Here we find modern transportation, large trucks and busses, many of them made in America.

In Brazil we find natives carrying huge burdens on their heads, oxen slowly laboring down the streets, and their swiftest mode of conveyance the much abused mule pulling heavily loaded wagons. In Buenos Aires we find many American business firms. Swift and Armour each have large packing plants there, Standard Oil is heavily interested, and many other corporations are doing business there; besides, many North American export men are to be found throughout the city representing our firms in the United States.

Since the war we have been doing a big export business in South America and now that Europe is getting back on her feet, so to speak, it is up to us to hold this trade. While there I noticed a Chamber of Commerce bulletin which stated that in 1924 we were second highest in shipping products into Argentine. To shop in Buenos Aires is much like shopping in our own American stores; our own products are much in evidence. During my stay there I attended a "Made in Argentine" Exposition and I believe that I am conservative in saying that two-thirds of the products shown were made by our own American industries now established in Argentine.

From a business point of view Buenos Aires is much like our own American cities, but they have their odd customs too numerous to mention, but driving up the left side of the street is very confusing to the North American, and they all complain of that.

I believe that some day soon there will be a big demand for technical men of all professions in Argentine. Surely there are big possibilities. There is much business there now but the efficiency is low and the awakening has just begun. This alone will call trained men to that country, and my advice is to the boys to go, but get the job before going and know your salary. It is no place to go looking for work; salaries and wages are low; board, house rents and clothing are considered 20 per cent higher than in the United States. On our trip down, there were ten men, some with their families, going on a second contract to the Standard Oil of Argentine; also seven Bethlehem Steel men were going to erect a refinery for the Standard Oil Company.

Now just a word about the products our boat brought back to New York. From Buenos Aires we carried many fruits, peaches, grapes, plums, and alligator pears. At Montevideo we took on about 2,000 tons of sun-dried beef and many varieties of fruits. At Santos, Brazil, we loaded nothing but coffee. For thirty-six hours two belt conveyors continuously dropped bags of coffee in each end of our boat until we had a cargo

Continued on Page Ten.

THE MISSOURI MINER.

The Official Publication of the M. S. M. Alumni Association.

A weekly paper published by the Students, in the interest of the Alumni, Students and Faculty of the Missouri School of Mines and Metallurgy, Rolla, Mo.

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Issued Every Monday.

May 28, 1925.

To the Alumni of M. S. M.:

The issue of a special alumni number of The Miner affords me a welcome opportunity to address a few words to our alumni.

The growth of the Alumni Association since 1920, brought about by the untiring devotion and hard persistent work of Professor Dean and the Presidents of the Association, Mr. Arthur D. Terrell and Mr. A. Emory Wishon, is very gratifying, and the Association as it now stands organized is of great assistance to the School of Mines.

To my mind the object of the Alumni Association is a spiritual one rather than a material one. It keeps alive in the minds of old M. S. M. men the spirit of their Alma Mater. Those who were in the school at Rolla are now widely scattered, some in the world's out-of-the-way places, and the Association serves the purpose of keeping them in touch with their old friends and comrades.

In modern days alumni associations are seemingly for the sole purpose of collecting dollars from graduates and erecting therewith monuments in brick and stone, but I am glad to say that this so far has not become our purpose.

The growth of an educational institution rests largely with those who have passed through it, and in this respect the old M. S. M. men are doing their full duty. The institution has grown rapidly in numbers, and investigation reveals that many men come to M. S. M. because they know a graduate or former student who has spoken well and favorably of his Alma Mater.

The engineering students now number 400 and come from 32 states and 6 foreign countries, so that we may well claim M. S. M. as a nationally and internationally known school.

There is considerable discussion in the technical press devoted to the Mineral Industry as to the building up in this country of a preeminent and premier mining school such as was old Freiberg, in Saxony. Here in Rolla we claim that as our goal and hope to reach it. In this we need the loyal help of every alumnus.

The establishment at M. S. M. of the Mississippi Valley Station of the Bureau of Mines, devoted to metallurgical and mining research, is of great value to the school. The work done here, as detailed in publications, is receiving wide recognition.

In recent years the Legislature of Missouri has been fairly liberal with the School of Mines in spite of the present surge of economy. The School now receives about twice as much as it did five years ago. While material improvements have proceeded rapidly in the last few years, there will be need of new buildings and equipment to keep pace with the growth. Though equipment does not make a school, nevertheless, a modern engineering school is not possible without the means to do with. Alumni, particularly those living in Missouri, can be of great aid in this connection and have been of much assistance in the past.

In closing, I wish to say that no one thing can give us greater pleasure than to have old M. S. M. men came back to Rolla and renew acquaintance with their Alma Mater.

Yours very truly,
CHARLES H. FULTON.

———M S M———

Patronize Our Advertisers.

LETTER FROM LYNTON.

STANDARD OIL COMPANY
Producing Department.
Los Angeles, Cal.,
May 20, 1925.

Mr. Paul L. Hopper,
Alumni Editor,
Missouri Miner,
Rolla, Missouri.

My dear Mr. Hopper:

I wish to acknowledge your letter of May 13th acknowledging Jimmy Keelyn's correct address. I am glad to hear that you are to have a special alumni edition of the Miner on June 1st, and I will attempt to give you some of the latest news regarding the fellows on the Coast. For additional data I would suggest that you refer to my letter of February 28th to Prof. Dean regarding the dinner and meeting that we held in Los Angeles on February 27th. In that letter I gave quite a few details regarding some of the men out here.

E. H. Broughton, '12, is with the Julian Petroleum Corporation and has his headquarters at Long Beach. He is engaged in doing Petroleum Engineering work for them and also tax and valuation matters.

Paul Coaske is working for himself in connection with Highway Construction.

L. S. Copelin, '13, has designed a very good core barrel for use in oil well drilling. He has his own men go out into the field and take these cores for the oil companies for a certain sum and I believe he is doing very well, his core barrel being one of the best ones in Southern California.

A. W. Gleason, '15, is one of the Assistant Superintendents for the Standard Oil Refinery at El Segundo.

S. E. Hollister, '13, is in business for himself manufacturing and marketing "Bestone" products. This is a species of stone for kitchen sinks. As there is a great deal of building in California at the present time, I should judge that Hollister will soon be a millionaire.

Floyd D. James, '17, is I believe, a Chemical Engineer for the Union Oil Building in Los Angeles, but James himself lives in the town of Whittier.

Paul Lindau, '11, is still with the Western Precipitation Company at 1016 West 9th St., Los Angeles. Paul has just returned from a trip to Utah where he saw some of the old grads, such as Engelman and Wagstaff. Paul also went through Arizona and saw Elbelt in Bisbee; also Hank

Adams and Forrester in Globe.

E. B. Thornhill, '08, has left Los Angeles and gone to Oleum near Martinez, where he has the position of Resident Engineer at the Union Oil Company Refinery in that place.

As for myself, I am still holding down the job of Resident Geologist and have charge of exploration work in Southern California for the Standard Oil Company.

In addition to the above names, there are about thirty men in this vicinity but I am not familiar enough with their movements to give you any definite news concerning them. I might add that Pudewa, '11, was in Los Angeles a few weeks ago, after having spent about eight years in South Africa. I did not see Pudewa so can not give further news regarding him.

I might say, now that graduation is so near, there will probably be several men coming out to the Coast and we suggest to any Rolla men that they call on Mr. Paul Lindau, at 1016 West 9th St., and advise him of their appearance in town. We use Mr. Lindau's office as general meeting place for all the Rolla men. Any one coming out to Los Angeles can have their mail sent in care of Lindau and it will be held for them.

I hope that the above will be of interest and assure you that I am glad to be of any help at any time to make The Miner the best college paper printed.

Yours truly,
EDWARD D. LYNTON, '12.

———M S M———

NEW STUDENTS.

The enrolment for college credit for the past year reached 399, only 19 less than the peak enrollment following the war. The Registrar has, since the summer of 1923, followed out an organized campaign for new students, and in this campaign the value of students and alumni was early recognized.

During the past year a geographic index of students in school was maintained, and whenever an inquiry was received from a prospective student from the home town of a student in school a copy of the letter of reply has been sent to the student here. The students have responded in splendid spirit to the suggestion that they get in touch with the prospect when next they go home.

This same scheme was tried last spring with the alumni with very satisfactory results. A mimeographed list of prospective students from the state in which the alumnus was located was sent to him with the request that he see as many of the prospects as possible. Sometimes copies of replies to inquiries have been sent to alumni where the prospects seemed seriously interested. One case might illustrate the results of this method. Copies of answers to four inquiries were, at different times, sent to one of the graduates living in Oklahoma. He promptly saw and interviewed these men, and three of them are now on the campus as students.

The attendance curve, following the drop after the war peak, now shows a decided upward trend, although the average curve for engineering schools is going downward. Every effort is being put forth by the school management to keep this curve pointed upwards, and to this end there are no greater agencies for help than the student body and the alumni. Good prospects are in sight for next year.

Just one word about the co-eds. A good deal has been said and written in The Miner on this subject during the past year, and it may be of interest to the alumni to know just how matters do stand. During the past year 19 of the 399 enrolled were women. The peak enrollment of 418 following the war included 19 women. The proportionate increase of co-eds is therefore a litle less than one-fourth of one per cent.

Geographical Distribution of Students School Year 1924-25.

Two hundred twelve of M. S. M.'s students come from all parts of Missouri. Illinois comes next with 54, and Oklahoma third with 27. The geographical distribution of the balance is as follows: Kansas, 14; Iowa, 11; Indiana, 10; Arkansas and New York, 6 each; New Jersey, Pennsylvania, and Texas, 5 each; Colorado, Nebraska, and Tennessee, 4 each; Ohio and Wisconsin, 3 each; California, Idaho, Massachusetts, Michigan, Virginia, and China, 2 each; and 1 each of Alabama, Kentucky, Louisiana, Minnesota, Oregon, Rhode Island, Utah, Washington, West Virginia, Wyoming, Canada, England, Norway, and Peru.

———M S M———

DR. EDWIN E. SLOSSON TO DELIVER COMMENCEMENT ADDRESS.

Dr. Edwin E. Slosson, the distinguished Director of Science Service, is perhaps better known to the lay-scientist, than any other man in the chemical profession today. We are all curious by nature and some of us even eager to learn when something new and interesting is presented in an entertaining manner. Few of us, however, unless we are scientifically inclined, have the background nor would we care to obtain it, in order that scientific subjects as usually written up, be readily understandable to us. Dr. Slosson, a writer of exceptional ability and a scientist of wide and varied experience, has the knack, or perhaps better, the art of assimilating scientific data, shearing it of its obscure technicalities, and remodeling it to fit the mind of the general public.

Since receiving his Ph.D. from the University of Chicago, Dr. Slosson has at different times been Professor of Chemistry in the University of Wyoming, Director of the Wyoming Agriculture Experiment Station, Literary Editor of "The Independent", and Associate in the Columbia School of Journalism. At present he is Director of Science Service, Washington, D. C.

His task as he assumed it, was to present to the public through the daily press an authentic account of the progress of modern science. As the author of several books and hundreds of articles his prolific pen has done much to popularize scientific achievement. His book, "Creative Chemistry", first published in a series of articles for "The Independent", presents a cross-sectional view of chemical control applied to our basic industries—making of dyes, sugar, rubber, metallurgy of iron and steel, etc.—and shows how our very national existence depends on these.

Not content with his triumph in his chosen fields, Dr. Slosson has invaded other branches of science and other subjects of interest even farther removed, journalism, sociology, mathematics, education, etc. His books include "Great American Universities", "Major Prophets of Today", "Six Major Prophets", "Creative Chemistry", "Easy Lessons in Einstein", "The American Spirit in Education", "Plots and Personalities", and "Chats on Science". Contributions to the daily press, "The Independent", and "World's Work" are numbered by the hundreds, some of which have been reprinted in book form.

Dr. Slosson is a Fellow of the A. A.

A. S., a member of the Phi Beta Kappa, Sigma Xi and the Washington Academy of Science.

Dr. Slosson has chosen as the subject of his commencement address, "Looking Backward and Living Forward." This address will be given Saturday, June 6, at 10 a. m. in Parker Hall.

———M S M———

Continued from Page Seven.

of 4,800 tons of coffee.

At Rio Janerio we pick up more tourists than anything else. We had as passengers on our return trip a French actress and an Italian baroness who was also an opera singer. These two furnished many delightful entertainments, which helped so much to pass the hours of monotony.

Our return trip was uneventful, although a severe storm just at the end of our journey terrified the passengers, bruising many, and more than once at dinner our dishes were upset in our laps. There were no casualties, however, and we were all a jubilant crowd as we pulled into the New York harbor and felt once more good old U. S. soil under our feet.

———M S M———

DR. SCHRENK LECTURES.

Last Thursday evening Dr. W. T. Schrenk delivered the last lecture of the Popular Lectures series on a most interesting subject, "The Chemistry of Every-Day Life." His talk was of great interest, and all those who attended were amply repaid. Dr. Schrenk brought to the attention of the audience the importance of the many things in our daily life that have a direct bearing upon chemistry. It is a very interesting field in our daily life.

The Popular Lectures series has been a great success in this its first semester and it is the hope of many that it will be continued in the future and become a regular course in the curricula of the School.

———M S M———

DR. DAKE WRITES BOOK ON MAP INTERPRETATION.

Dr. C. L. Dake, Professor of Geology at M. S. M., has recently written a new text, "Interpretation of Topographic and Geologic Maps", in collaboration with Dr. J. S. Brown, to be published by McGraw-Hill early in June. Although designed to serve as a text in map interpretation, it should contribute to a much larger field. It constitutes a thorough review of many of the principles of general and structural geology, and should prove of value as a supplementary text in such courses. It will appeal to the young geologist making his first map and to the more experienced petroleum geologist and mining engineer who appreciates the difficulties involved in accurate map making. As a field manual it will assist in reconnaissance by its emphasis on the relation of structure to topographic features; and in detailed studies will guide in analysis of the geologic maps that the engineer may find valuable, or see fit to have made.

———M S M———

PERSONALS.

E. W. "Jeff" Rembert, '21, is Chemical Engineer in the Engineering and Development Division of the National Analine & Chemical Company at Buffalo, N. Y.

Dave Walsh, '23, who is taking some advanced metallurgy work at the University of Nancy, Nancy, France, has been spending the last few months visiting in Nice, Switzerland and at Monte Carlo. Dave recommends these places most highly and sends beautiful postcards to verify all his statements.

Robt. L. Mook, '21, is now Assistant Manager for the Massachusetts Bonding Company, 401 Insurance Exchange Bldg., San Francisco, Cal.

James L. Head, who is Mining Engineer with the Chile Exploration Company at Chuquicamata, Chile, sent us under date of April 13, the following news items:

F. K. M. Hunter, '23, was married in Chuquicamata on February 20, to Miss Rosamond Upham of New York City.

H. H. Hoppock, '20, visited us last week on his way to the states after three years with the Braden Copper Co., at Rancaqua.

G. S. Wyman, '22, will soon return to the states.

E. Taylor (Polar Bear) Campbell Geologist for the St. Louis Smelting & Refining Company at St. Francois, Mo., continues to pursue the elusive golf ball. He is now a member of the Board of Directors and Chairman of the Grounds Committee of the St. Francois Country Club at Farmington.

C. E. Minor, '04, is Mine & Mill Superintendent for the Tennessee Copper Company at Copper Hill, Tenn.

Thomas A. Stroup, '12, has severed his connections as Superintendent of Mines with the Utah Fuel Company, and will not resume his professional work until his return from abroad. (Min. & Met.)

Daniel C. Beyer, '20, is Field Engineer with the Fairbanks Exploration Company at Fairbanks, Alaska.

R. A. Bingham, '11, is now Chief Engineer for the Thomas Maddock Sons Company at Trenton, N. J.

E. M. Johnson, General Superintendent of the Eagle-Picher Lead Company, Henryetta, Okla.; K. V. B. Rossman, Superintendent of the American Zinc Company of Illinois, Hillsboro, Illinois; and J. R. Crenshaw, General Manager of the Eagle-Picher Lead Company, E. St. Louis, Illinois, attended the meeting of the American Zinc Institute in St. Louis, April 17th.

R. C. Schappler, '20, now geologist in material mechanic work with the Missouri State Highway Department, is located at Jefferson City, Missouri.

C. P. Howard, '20, spent a few days in Rolla last week. He is Engineer for the Main Island Creek Coal Company, Omar, W. Va.

L. L. Coover, '12, who is in the bond business in Springfield, Mo., was a visitor on the campus last week.

T. S. Dunn, '10, who is Professor of Geology and Metallurgy at the Georgia School of Technology, will spend the summer in Rolla doing research work in the Department of Metallurgy.

Martin F. Zogg, '25, former advertising manager on The Miner, is with the Illinois State Highway at Cairo, Ill.

A. B. Wilkerson, '23, is now Steel Metallurgist for Red River Lumber Co., at Westwood, Calif.

W. H. Backer, '24, is Stope engineer with the Butte & Superior Mining Co., Butte, Montana.

A. V. Eulich, wife and boy, are back from Africa and he intends to go to Colombia to prospect for platium after spending a month in Rolla.

H. G. S. Anderson is back in Rolla for the summer.

Kurt deCousser and wife are in Rolla for a week.

———M S M———

Daughter: "He says he thinks I'm the nicest girl in town. Shall I ask him to call?"

Mother: "No, dear, let him keep on thinking so."—Ex.

Continued from Page Six

vises so located as to be accessible to the entire class. There is also a fair sized drill press and two emery wheels for rough grinding.

The oxy-acetylene room is fitted with six welding stations, one cutting torch, work benches and an acetylene generator located at the north end of the main building. Men taking forge shop are required to devote part of their scheduled time to oxy-acetylene welding work.

The machine shop is equipped with several lathes of various swings, a planer, shaper, milling machine, surface grinder, arbor grinder, drill presses, power saw, tool grinding wheels and a very thoroughly equipped tool room where a drill grinder, cutter grinder and lathe are also located. Each man taking the machine shop course receives instruction on all the machines. We make one departure from the usual way this work is conducted and that is to give the students actual machine parts to make to replace worn out parts from the school equipment, also there is some work that comes from outside and wherever a student has had sufficient training to handle one of these jobs he is given that job as part of his work. We feel that this system keeps the fellows more interested in the work; also, that they obtain more benefit from this arrangement.

Proposed changes in the Mechanical Hall deal almost entirely with the building itself. Here we propose to excavate for a basement, to be used for storage space and location of equipment. The present first floor will be replaced throughout by a reinforced concrete floor mushroom type. The second floor will be similarly constructed and will be divided up into classrooms and offices, also a reading room where the fellows will be exposed to the kindly influence of manufacturers catalogs, technical, and trade journals.

M. S. M. GEOLOGISTS.

Following are Abstracts of Papers Offered by M. S. M. Men at the Wichita, Kansas, Meeting of the American Association of Petroleum Geologists, March 26, 27, and 28.

"Geology of Russell County, Kansas, Both Surface and Subsurface," M. M. Valerius.—The paper deals with the general geology of the surface, together with stratigraphic section of surface outcrops, treats both surface and subsurface conditions of the Russell County oil field, gives the history of the discovery well in detail together with cross sections, showing position of producing horizon with reference to surface structure, and notes present development and total production with curves based on individual wells.

"The Cromwell Oil Pool," L. G. Keppler, G. A. Kroenlein, A. W. Lauer.—The geology of this area differs in many respects from that of the older developed portion of Oklahoma, lying directly to the north and east. Both structural and sand conditions are geologic problems that have not been satisfactorily solved. On that account future development cannot be planned with any degree of accuracy or confidence. A surprisingly large number of small faults characterize the surface geology. An unusually sharp break or fault in the producing horizon marks the limit of production on the east. The relation of the surface and subsurface faults presents an interesting problem. The producing horizon is very thin, spotted, and unlike the ordinary sand bodies of no theastern Oklahoma, in that it is largely limestone. It is characterized by large flush production and very short life. As a whole, this is one of the most erratic areas in Oklahoma.

"Papoose Pool," Harry H. Nowlan.—The Papoose Pool lies about six miles southeast of the Cromwell Pool in Okfuskee and Hughes Counties, Oklahoma. Surface geology shows very little folding, but on the subsurface the development reveals two very marked structural "highs." The subsurface structure is defined on the south and west, but is still undeveloped on the east and north. The development characteristics are similar to Cromwell since the production is from the same sand zone, namely "Cromwell" or "Papoose" sand. The subsurface at Papoose has not yet proven any faulting similar to that on the east side of Cromwell. The sand conditions in Papoose appear to be somewhat better than at Cromwell. It is the concensus of opinion that the life of production in Papoose will be longer than at Cromwell, and the yield per acre considerably greater over the entire pool.

"Faulting in the Rocky Mountain Region," J.S. Irwin.—This paper deals with thrust and normal faults associated with anticlines and domes, and the relation of these structural features to oil and gas accumulation.

Sidelights of the Convention.

Original humor of the highest type is always one of the outstanding features of a convention of the American Association of Petraleum Geologists, and the meeting just concluded at Wichita, Kansas, was no exception.

The rock hound (beg pardon, James H.) pebble puppy, or fossil ferret who didn't leave the vaudeville show in the auditorium at the Forum at Wichita with aching ribs and a face that felt stretched from ear to ear last Friday night, has been peacefully buried with fitting ceremonies. He ate too much at the banquet. In fact, if any one present wasn't a complete wreck when Arthur Truex and Harry Nowlan got through with their black-face act, singing their "How do you do" song, he was ruined by R. B. Whitehead and J. Elmer Thomas, who put on a reminder of last year's convention at Houston, Texas, an act which is good for "Big Time" vaudeville any day.

———M S M———

PERSONALS, CLASS '25.

M. L. "Atty" Atkinson is now employed by the Phillips Petroleum Company at Stroud, Okla.

Leo L. Burnet has employment with the U. S. Engineers' Office, St. Louis, Mo.

Wm. H. Bush is with the Mississippi Valley Structural Steel Company, St. Louis, Mo.

John W. Feming is in the employ of the Illinois State Highway Commission, Ottawa, Ill., as is also C. C. Irving.

J. N. Foster is in charge of Drafting Department, Chief Engineers' Office, St. Louis & San Francisco Ry., St. Louis, Mo.

E. J. Gorman has gone to South America. He is employed by the Braden Copper Company.

A. L. Heitman has gone to work for the St. Joseph Lead Company, Leadwood, Mo.

H. W. Hodges, I. G. Knoebel and A. E. Buck are with the Colorado Fuel & Iron Company at Pueblo, Colo.

C. H. Lindsly, Waring Mikell and J. L. Pasley are with the Missouri Highway Commission with headquarters at Jefferson City.

P. K. Meng and S. M. Rathbone are Assistant Valuation Engineers in the Valuation Department of the St. Louis & San Francisco Railway Company, St. Louis, Mo.

J. A. Westgard is with the Missouri Highway Commission, Hannibal, Mo.

———M S M———

Subscribe for the MINER.

WHO'S WHO.

Jackson is a name familiar to most of us. In the past there has been more than one person of that name who acquired considerable fame. Perhaps Andrew Jackson and Stonewall Jackson are our outstanding personages by that name.

But to the senior, or recent graduate of M. S. M., the word Jackson has an entirely different significance —it is synonmous with a certain required course in Power Plants, in which most seniors find it difficult to obtain credit.

However, the old grads who come back, tell us Prof. Jackson's courses are really worth wading through, as the knowledge acquired stands the test when applied in practice out of school.

Professor R. O. Jackson, who is head of the Department of Mechanical Engineering, came to M. S. M. in 1921 from the Case School of Applied Science in Cleveland, Ohio He is a graduate of the University of Maine, having received his B. S. in 1913, and his M. E. in 1923. From 1914 to 1918 Prof. Jackson was engaged in experimental work done in collaboration with Dr. Fulton. On taking up his duties at M. S. M. Dr. Fulton found that the reputation of the Mechanical Engineering Department was not up to the standard set by other departments of engineering at M. S. M. And having knowledge of Professor Jackson's extraordinar ability along lines of mechanical construction, Dr. Fulton became instrumental in securing Professor Jackson's release at Case, in order that he might come to Rolla and become the head of our School of Mechanical Engineering at M. S. M.

Since coming to Rolla Professor Jackson has re-designed the power plant so that it now serves a two-fold purpose—that of practical and theoretical instruction for the student, as well as a source of light and power used by the school. The installation of equipment in the Mining Experiment building was done under his supervision. He has reorganized the courses in his department to such extent that M. S. M. now ranks favorably with the best technical schools of its size in the country in mechanical engineering.

Before coming to Rolla he spent two years at the Case School of Applied Science in Cleveland; worked for the Metallurgical Laboratories, Inc., of Cleveland and St. Louis; was employed by the Hercules Powder Co. in charge of construction and test work at Kenvil, and as resident engineer at Joplin, and was in charge of construction, maintenance and power while at the Union plant of the Hercules Powder Co.

Prof. Jackson has accomplished much in the short time he has been in Rolla, and we are looking for bigger things from him in the future.

———M S M———

R. O. T. C. SUMMER CAMP.

This year's delegation to the Reserve Officer's Training Camp at Ft. Snelling, Minn., will be the largest in the history of M. S. M. Lieutenant Walters and Sergeant Scott are detailed for camp duty this summer. Lieutenant Wanamaker is not making the trip, as he is being transferred to Ft. DuPont, Delaware. The following men will report for training at Ft. Snelling June 12th, and return sometime after July 23, when camp closes: Barnard, Albert E.; Birchard Harry; Couch, Robert W.; Crawford, James D.; Cutter, Lloyd A.; Ellison, Kenneth A.; Fruit, Warren; Guenther, Roy; Hasselman, Karl F.; Herman, Theodore; Holman, Joe A.; Johnson, Raymond A.; Kraft, Ned; Knox, Richard H.; Ledford, Mike A.; Letts, George B.; Luckfield, Charles; McCaw, Robert E.; Miller, Robert K.; Moore, Sherwood L.; Peugnet, Amadie A.; Riske, Richard; Scheer, Randle; Smith, Alfred; Smith, Paul A.; Smith, C. C.; Smith, J. W.; White, Ronald M.; Wightman, Randall H. How about that Cup for Efficiency in General Engineering Practice? We are expecting you fellows to uphold the reputation of M. S. M., and bring back all the trophies transportable.

———M S M———

ROLLAMO ELECTION.

Last Tuesday evening the Rollamo Board held elections for positions on the Board for next year. The result was as follows: Editor-in-Chief, Elmer Gammeter; Organization Editor, . Herder; Athletic Editor, T. P. Smith, Jr.; Art Editor, unfilled; Assistant Art Editor, Albert E. Barnard; Business Manager, R. H. Wightman; Circulation Manager, Alfred Smith; Advertising Manager, James McGraw.

———M S M———

Prof: "Boob, can you tell me the difference between a pint and a quart?"

Boob: "Sure! A pint makes 'em dizzy, and a quart knocks 'em cold."

———M S M———

Jennie: "Say something soft and sweet to me, dearest."

Otho: "Custard pie."

———M S M———

Prof: "How would you tell the height of a tower by means of a barometer?"

Stude: "I'd lower the barometer from the top of the tower and then measure the rope." —Stone Hill.

———M S M———

Ortho: "Is it true that the wording of the marriage ceremony is being revised?"

Rhyncula: "Yes; from now on they are to read: 'Till the judge do us part.' "

Subscribe for the MINER.

DOUGLASS-ENGLAND.

Time reveals the future and also the past. Saturday of St. Pat's, March 14, 1925, Mr. Robert S. Douglass was married to Miss Margaret England. Although the license was obtained in Rolla and the young couple married in St. James, it remained a secret to all until its announcement a few days ago.

Although this is the groom's first year at the School of Mines, he has made a host of friends. He is a member of the Class of '26 and of the Kappa Sigma Fraternity.

The bride is a resident of Cape Girardeau, Mo., and is a popular member of this year's graduating class of Stephens College at Columbia, Mo.

The young couple expect to make Rolla their home next fall.

———M S M———

GRUBSTAKER COMMENCEMENT DANCE.

The Grubstaker Club entertained with their annual commencement dance on Friday, May 29. There is no doubt the seniors leaving school were proud of the last "get-together" they could attend.

The chaperones were Mrs. N. R. Faulkner, Mr. and Mrs. P. H. McGregor, Mr. and Mrs. E. S. Wheeler, and Mr. and Mrs. D. G. Kennedy. The Varisty Orchestra made the dancing a pleasure.

———M S M———

LAMBDA CHI DANCE.

Lambda Chi Alpha entertained on Wednesday evening, May 27, with a dance in honor of Lieutenant and Mrs. W. W. Wanamaker, who left Sunday for Ft. DuPont, Delaware, where Lieutenant Wanamaker will be stationed. The night was perfect, the orchestra at its best; need it be said that the dance was a success?

Chaperons for the occasion were Lieutenant and Mrs. W. W. Wanamaker, Dr. and Mrs. S. L. Baysinger, and Mrs. Mabel Smith.

———M S M———

K. K. K. (in oral quiz): "What is a molecule?"

Frosh: "It's one of those glass things that Englishmen wear in their eyes."

———M S M———

"Mother, may I go out to swim?"
"Yes, my darling daughter.
Hang your hat on a hickory limb
And PLEASE go in the water!"

———M S M———

He: "Parlor tennis, you say?"

Him: Yes, she raised a racket when he tore her hair net."

—Michigan Gargoyle.

WHERE WE'RE FROM.

The total number of students registered at M. S. M. for the school year 1924-25 is 399. This is exclusive of extension and other students who do not reside at Rolla. M. S. M. has shown a slow but gradual increase in enrollment for many years. We are fortunate in this respect, for most of the engineering schools of the United States have suffered quite a loss, the Michigan College of Mines, e. g., having an attendance at present of only 51 percent of the 1921 enrollment, which was 366. Considering the fact that M. S. M. is not located in or very near to a large city from which a large number of students may be gathered, such as the Colorado School of Mines, which draws 30 percent of its students from Denver, we may feel well satisfied with our enrollment, so long as an increase continues.

The man who invented the vacuum produced absolutely nothing, but he got a lot of credit.—Ex.

GEOLOGY DEPARTMENT RECEIVES NEW COLLECTIONS.

The Department of Geology has recently received the following collections:

A suite of igneous rocks from the San Yoquivo district, Chihuahua, Mexico, collected and sent in by B. E. Charles, M. S. M. 1922. Mr. Charles has been in Mexico ever since his graduation and writes interestingly of his experience. Some of the tuffs in the collection contain the impressions of leaves and stems of plants.

V. H. Hughes, M. S. M. '12, has sent in a small collection of fossils from "the famous (or notorious) caliche beds" of western Oklahoma.

J. F. Hosterman, M. S. M. '21, has recently been transferred from Oklahoma to Louisiana. He has just sent the department a large collection of Pennsylvania fossils from central Oklahoma.

———M S M———

SOUTHERN CALIFORNIA ALUMNI ASSOCIATION ORGANIZED.

The Southern California Section of the Missouri School of Mines Alumni Association was organized on February 28th, 1925, at which time a banquet was held in Los Angeles, Calif.

At this meeting Edward D. Lynton, '12, was elected President, and H. F. Valentine, '23, was elected Secretary and Treasurer. These two men, with A. W. Gleason, constitute the Executive Committee. The Southern California Section will use as their headquarters the office of S. Paul Lindau, at the Western Precipitation Works, 1016 West 9th St., Los Angeles, Calif.

"You are wearing some good looking golf socks."

"What makes you think they are golf socks?"

"I just counted nine holes."—Ex.

DO YOU KNOW WHERE ANY OF THESE MEN ARE LOCATED?

Albert, H. I., '21.
Albertson, M. M., '11.
Baker, C. A., '08.
Barker, Ralph, '98.
Brown, W. E., '07.
Buser, H. C., '23.
Chamberlain, Santiago, '00.
Condon, Geo., '12.
Cuellar, Thomas (Ribson) '14.
Elmore, C. E. '11.
Emerson, Cyrus H., '76.
Farrar, Monroe, '11.
Forman, J. K., '10.
Garvens, O. E., '76.
Glidsborough, T. R., '14.
Goldsmith, Osher, '20.
Green, C. T., '06.
Habertheir, J. J., '23.
Hatmaker, P. C., '23.
Hendry, D. J., '23.
Herdman, Geo. W., '94.
Hoo, Te Chun, '18.
Hoover, B. F., '23.
Hopkins, James, '13.
Hunt, L. H., '05.
Jewell, J. E., '22.
Keelyn, J. L., '12.
Keenan, J. T., '17.
Koniston, C. W., '09.
Kibe, H. C., '09.
Knappenberger, W. R., '13.
Logan, L. S., '03.
Long, J. C., '07.
Lumpkin, L. E., '21.
Luther, W. A., '03.
McCarthy, L. M., '20.
McGoughran, J. E., '11.
Ma, Heng-Yung, '21.
Martinez, J. G., '86.
May, Lawrence, '02.
Moore, F. V., '20.
Moore, P. A., '13.
Mosena, C. C., '22.
Neal, O. D., '14.
Neer, D. M., '08.
Nevedomsky, S. L., '21.
Nevin, J. R., '17.
Pack, J. A., '77.
Pape, P. F., '17.
Perkins, W. C., '07.
Price, E. E., '04.
Price, J. M., '04.
Quinn, M. V., '05.
Rackett, G. F., '20.
Rivera, Ramon, '06.
Ross, Beuaregard, '82.
Schappler, R. C., '20.
Schmidt, S. R., '10.
Schulze, E. V., '03.
Schulze, H. O., '99.
Sebree, J. P., '07.
Shah, A. M., '09.
Shanks, J. D., '06.
Sheffer, M. S., '12.
Shotwell, J. W., '15.
Smith, Chas. D., '05.
Spengler, Albert, '01.
Stevens, J. V., '06.
Thomas, Geo. S., '12.
Sunada, Sakuhei, '07.
Torrence, E. C., '98.
Tseung, T. C., '07.
Van Devander, H. N., '82.
Wiles, Geo. B., '87.
Zirulick, Hyman, '08.
Keeler, Edgar A., '23.

TWO NEW WELLS DUE.

M. M. Valerius Has "Pair" on Top of Sand at Fairport.

Today at noon the M. M. Valerius Oil & Gas Company were about to drill in two new wells at the Oswald pool. They are Oswald-Valerius No. 4 and Oswald-Valerius No. 5 wells. Indications are, it was said at the office of the company, that both wells will be good producers.

A third well, the Caroline Sutton No .2, also was "setting on top of sand" and would be drilled in within two or three days., it was said.

All efforts thus far to find the new producing stratum of sand found in the Stearns & Streeter Oswald No. 2 well which, since being deepened three weeks ago has been producing from 600 to 700 barrels a day, has thus far failed. However, the two Valerius wells being deepened with the hope of finding it are not as yet deep enough to have missed this horizon, it is believed.